

# THE CELESTIAL DAVID AND GOLIATH

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## ABSTRACT

The story of David and Goliath is echoed in many mythic tales; special attention is given to three Irish versions. The protagonists have different names, rooted in the ancient Sanskrit language. Hence, it is argued, the story must be very ancient and also Central Asian. This paper suggests it is based in astronomy; the identification of the heroes with the constellations has been aided by scenes on the Gundestrup Cauldron. Lugh (or David) was the constellation Boötes, his father was Hercules, a source of meteors, the sling was Corona Borealis, and Balor (or Goliath) was Orion. By reference to precession of the celestial pole, it is suggested that the myth was formed about 3500 BC. The folktale is international, found from Western Europe and Egypt to India.

## RÉSUMÉ

L'histoire de David et Goliath se répète dans plusieurs légendes; on débute ici avec trois versions irlandaises. Les protagonistes portent des noms divers dérivés du sanskrit. On soutient donc que l'histoire serait très ancienne et qu'elle proviendrait de l'Asie centrale. Ce document propose qu'elle dérive de l'astronomie, ce qui est confirmé grâce à certaines images des héros retrouvées sur le chaudron de Gundestrup. Lugh (David) était la constellation Boötes, son père était Hercules, rayonnant de météores (les projectiles), la fronde était Corona Boréalis, et Balor (Goliath) était Orion. En référant à la précession, on s'aperçoit que le mythe a été conçu à peu près 3500 av. J.-C. La légende se déploie de l'Europe occidentale et de l'Égypte jusqu'à l'Inde.

## 1. INTRODUCTION

*And David put his hand in his bag, and took thence a stone, and slang it, and smote the Philistine [Goliath] in his forehead, that the stone sunk into his forehead; and he fell upon his face to the earth.*

I Samuel 17:49

The biblical story of David and Goliath is familiar to most people. It is an example of an international folk tale with characteristic motifs. Versions of the story can be found in Irish folklore, and include myths representing the following incidents: Lugh killing Balor, Cet killing Concubar, or Finn killing the One-Eyed Wizard. Their main protagonists were deities. Many myths, especially those of the Greeks, have been interpreted as legends of the stars (Allen 1963), but not the story of David and Goliath. Although Irish folklorists have recognized the theme in tales like that of Finn killing the Wizard, no one has sug-

TABLE I  
MYTHOLOGICAL NAMES OR OBJECTS AND THEIR ASSOCIATED CONSTELLATIONS

Constellation	Biblical Name	Folkloric Name of Resident Hero or Object
Hercules	Saul	Aed/Cet, Cernunnos the Horned One (8000 BC)
Corona Borealis	sling	Slingshot, Mes Gegra's brain, Wizard's ring
Boötes	David	Cernunnos the Horned One (5000 BC), Finn
Orion	Goliath	Balor, Concubar, Wizard

gested that it has an astronomical source. As argued here, the characters can be recognized in the stars as some of the familiar constellations. In particular, David appears likely to be associated with the constellation of Boötes, his sling with nearby Corona Borealis, and Goliath with the constellation of Orion on the other side of the sky. It is suggested that “David and Goliath” was an international myth of the stars, originating among the prehistoric speakers of Sanskrit.

## 2. THE IRISH MYTHS

In Irish legend Balor was a famous warrior who had one eye in the middle of his forehead. Another, his baleful eye, was in the back of his skull. With it he could strike people dead by looking at them, but he kept it covered except when he wanted to petrify his enemies. Lugh, the divine hero, was youthful, athletic and handsome. When he saw Balor open his eye against him, Lugh cast one of his father Aed's thunderbolts at him with a slingshot, driving the thunderbolt through the back of Balor's head and killing him (Mac Cana 1970). In another version the cattle raider Cet put the brain of Mes Gegra in his sling and hit the crown of Concubar's head. Then Fingen, Concubar's physician, stitched his head closed (Smith 1988).

Still another variant is that of how Finn got his Name. He received it only when the One-Eyed, Red-Haired Wizard called it out. Finn blinded the wizard by pinning him through the eye to the ground with a fish fork. The Wizard, seeking to kill Finn, stumbled after him and threw his magic ring over Finn's finger. The ring called out where Finn was, but Finn cut off the finger with the ring on it and threw it over a cliff. The Wizard leapt after it and was killed (O'Conaill 1981).

These versions of “David and Goliath,” having been collected from traditional story tellers, may preserve motifs of the underlying star myth. As demonstrated here, other cultures also maintained the myth, with variations. The main protagonists can be associated with known constellations, as argued here. Table I provides a summary to help the reader keep the names in order, and to indicate the constellations that appear to be related to each character or object. The justification for the identification of each with the listed constellations follows.

TABLE II  
SANSKRIT MEANINGS OF THE NAMES OF THE HEROES

Name of Hero	Sanskrit Root	Meaning	Secondary Meaning	Reference
Aed ( <i>pron.</i> A or E)	dah <sup>1</sup>	fire	smith, Agni	Turner (1966)
Balor				
Germanic blend	bhel	shine, flash	dazzle, blind	Morris (1969)
	bala (related)	power, strength	giant	Turner (1966)
Cet				
coet (Welsh)	kaito	woodland		Morris (1969)
coill (Irish)	kaito	woodland		Morris (1969)
David	diew	shine	god, sky, Zeus	Morris (1969)
Concubar	kem (com)	seize, take captive	bow-hunter <sup>2</sup>	Wyld (1936)
( <i>pron.</i> crah-her)	kewep (cupid)	passionately desirous		
dragon	derk	see	serpent <sup>3</sup>	Wyld (1936)
Finn	wen	desire, strive	the Hunter	Morris (1969)
Goliath	ghel	shine	yellow, gold	Morris (1969)
Lugh ( <i>pron.</i> loo)	luc	light, shine		Turner (1966)
Saul	swel	shine, burn	silver	Morris (1969)

<sup>1</sup> The Sanskrit *dadda* for father (Turner 1966) makes a pun. The Father-god was the Creator of mankind, master of thunder and lightning, and possessor of the venomous spear, the thunderbolt.

<sup>2</sup> See Endnote 1.

<sup>3</sup> A reference to the petrifying glance of Balor, since the serpent was believed to be sharp-sighted.

### 3. THE SPEAKERS OF SANSKRIT NAMED THE CONSTELLATIONS

Table II summarizes some of the etymological information pertaining to the names of the gods in the myth, and provides evidence that their roots are to be found in Sanskrit, now a dead language but once the original language of the Indo-European peoples. The gods and the stories about them must therefore be of deep antiquity, not inconsistent with the date of 3500 BC established later for the origin of the myth.

Renfrew (1989) reviewed the origin and spread of the Indo-Europeans and their languages. As he showed, the Indo-Europeans migrated out of a homeland north and northeast of the Black Sea as mounted warriors in the hypothetical Kurgan Invasion of about 4000 BC, and reached Greece about 3500 BC. These dates are again not inconsistent with the present dating of the myth. As these people spread from India to Iceland, their speech evolved into distinct languages. The Celtic language area extended from around the Black Sea, through southwestern Europe, and north into Ireland and Scotland. It should therefore not be surprising to find that the names of the David and Goliath figures have Sanskrit roots.

The Greek poet Aratus, in composing his poem *The Phaenomena*, is believed to have based his astronomical references on an already antique celestial sphere

known as the sphere of Eudoxus. Ovenden (1966) agreed with Maunder (1908) in his analysis of the sphere. There was a “zone of avoidance” in the far southern hemisphere so located that, around 2700 BC, an observer at about latitude  $35^\circ$  N to  $37^\circ$  N would not be able to see the stars in that part of the sky. The boundaries of the zone establish the latitude of the “constellation-makers” and date the making of the sphere. A subsequent study by Roy (1984) agreed on the implied latitude for the constellation-makers. Both Maunder and Ovenden noted that, on the sphere, snake constellations denoted important circles, *e.g.*, Hydra marked the celestial equator of 3000 BC. Both authors concluded that the constellations were already named by 2700 BC. If so, they could have been named much earlier. Except for the most southerly, they could have been formulated by a people dwelling upwards of latitude  $45^\circ$  N. As far north as that and farther, all the stars and constellations named here would have been visible. Gurshtein (1993), in fact, has argued for an earlier origin for many of the zodiacal constellations, which is consistent with a possible origin with the ancient Indo-Europeans. While still in their original homeland they could have named most of the constellations. That they named the associated gods in Sanskrit makes a key point likely — it was the Indo-Europeans who delineated the constellations. This is not to say that they formed them or named them entirely as we know them today.

#### 4. PRECESSION AND THE FEAR OF THE SKY FALLING

The investigation of the David and Goliath story as a myth of the stars must begin with noting the effect of precession of the equinoxes. It is the slow conical swing of the axis of the Earth, acting as a huge spinning top. The result is that, in a period of 25,800 years, the pole of the heavens moves as a circle on the celestial sphere on a radius of  $23.4^\circ$ . The locus of the pole among the stars is shown in figure 1.

Precession caused the ancients to fear that the sky was falling. As may be seen in figure 1, Vega was near the celestial pole of 11,000 BC, and may have been regarded in ancient times as the supreme god, who supported the apex of the universe. Its name is from the Sanskrit, *weg*, meaning “the wakeful” (Morris 1969). The Akkadians called it the *Life of Heaven*, and the Assyrians the *Judge of Heaven* (Allen 1963). By 8000 BC they must have noticed that it had “fallen” from its place, and it has continued to fall. The fall may be mentioned in the Bible (Isaiah 14:12). Today Vega is  $51^\circ$  from the pole.

The Celts were among those who feared the sky was falling, as a quotation from Mac Cana (1970) suggests:

*The Adriatic Celts, when they were asked by Alexander the Great what they feared most, are reported to have said — with disarming candour — that they feared no one, unless it were that the sky might fall upon them.*

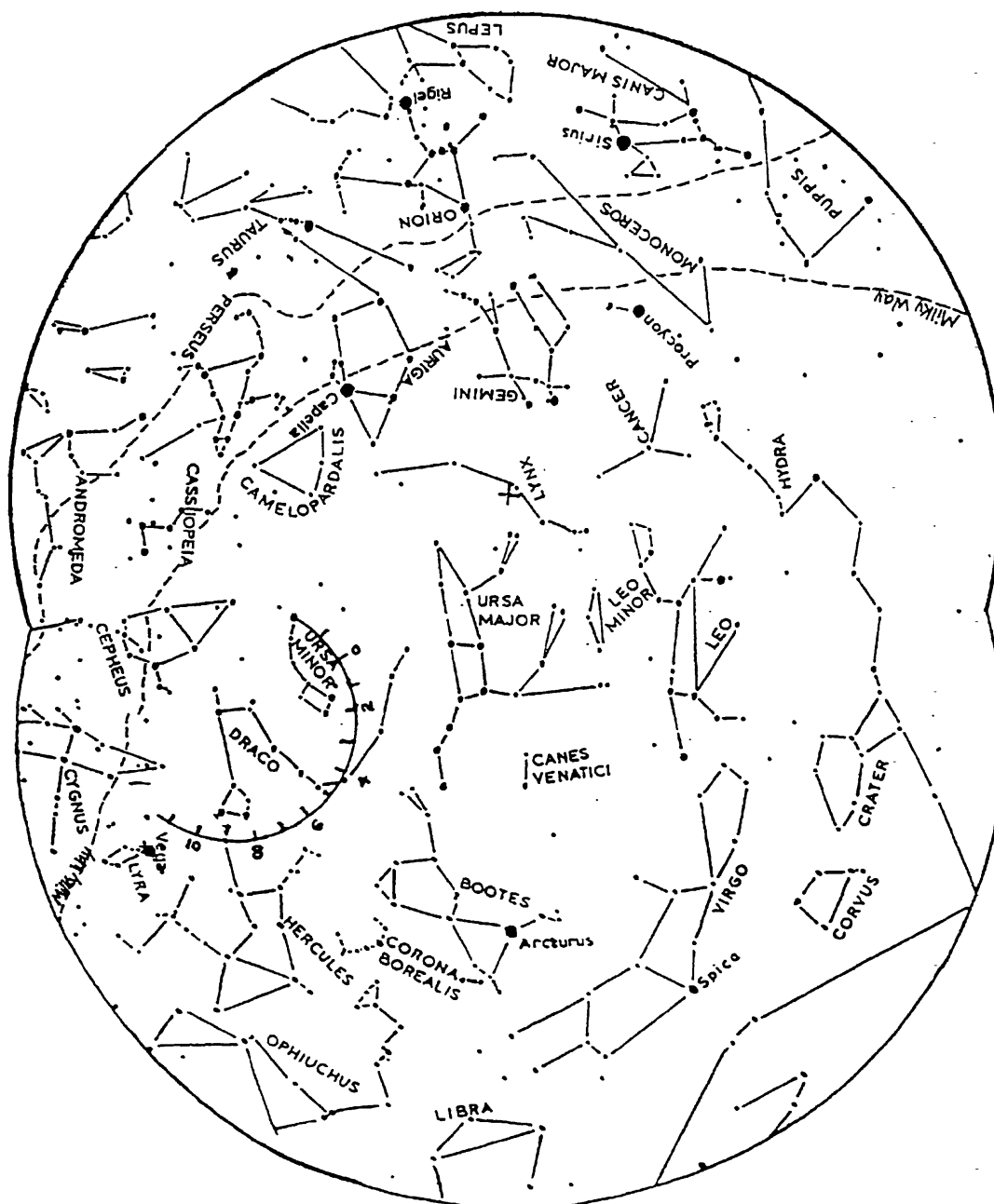


FIG. 1—Chart of that portion of the sky visible to an observer near latitude  $45^{\circ}$  N. The locus of the celestial pole, moving as a result of precession, is shown as an arc scaled in thousands of years BC.

The concept of *the sky falling* helps us to interpret the Horned One of figure 2 as the constellation Hercules. The figure shows a rock carving of the first millennium BC from Camonica in northern Italy. The larger of two men seems to depict the combined constellations of Hercules and Ophiuchus (see figure 1). Some outlines of Ophiuchus draw a rectangle that corresponds to the long skirt. The com-





FIG. 2—Rock carving from Camonica in northern Italy. [Copyright, WARA, Centro Camuno di Studi Preistorici, 25044 Capo di Ponte, Val Camonica (Brescia), Italy; used by permission.]

bined asterisms possibly constituted the obsolete constellation of Menat (Allen 1963). Mac Cana pronounced the tall figure to be the antlered god Cernunnos. He observed the serpent in his left hand, which I see as the constellation *Serpens Caput*. He commented upon the torc (heavy circlet) on his right arm; Celtic figures have frequently been depicted as wearing the torc as an amulet. Further, as we may observe in figure 1, the round mark at the upper right of the rock carving is in the right position for *Corona Borealis*.

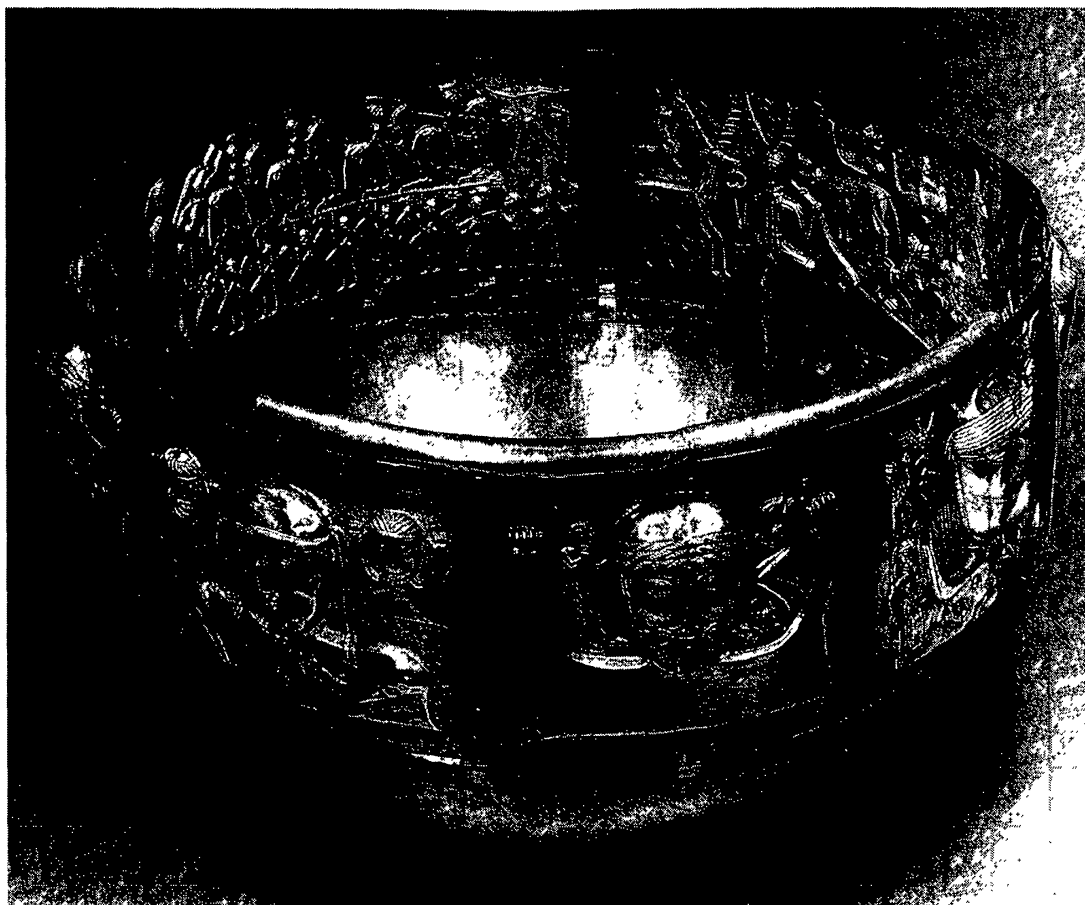


FIG. 3—The Gundestrup Cauldron. [Danish National Museum photograph, used by permission.]

The point I particularly wish to make is that the hands of Cernunnos are raised in the weight lifter's pose. Mythologists have called it the *orans position*. As I would argue, the god is holding up the sky. Eliade (1964) has described how the Siberian shamans believed that the high branches of the sacred birch reached to the sphere of the fixed stars, and would erect birch pillars to support the sky. Like the pillars, the antlers of Cernunnos may perhaps be interpreted as supporting the sky. As may be seen in figure 1, the pole of the heavens was midway between the upraised arms of Hercules at 8000 BC. Hence, the idea that Cernunnos supported the sky is likely to have originated broadly near that date. As suggested here, when precession continued, the *persona* of the Horned One moved into the constellation Boötes. There he was known as Lugh.

## 5. THE GUNDESTRUP CAULDRON

Another piece of the puzzle is provided by the Gundestrup Cauldron, enabling us to recognize Cernunnos, or Lugh, as the constellation Boötes. The Cauldron, 69 cm in diameter, is shown in figure 3. It was found in a bog at Gundestrup,



FIG. 4—Two panels from the Gundestrup Cauldron depicting Tyrannus (upper) and the Horned One among the polar constellations (lower). [Copyright T. G. E. Powell; from *The European Community in Later Prehistory*, Studies in honour of C. F. C. Hawkes, ed. John Boardman, M. A. Brown, & T. G. E. Powell (Routledge and Kegan Paul: London), 1971.]

Denmark, but is considered to have been made in the region of the Lower Danube — a region early populated by Celts — whence it probably reached Denmark as booty or by way of trade. For a full description see Davidson (1975). It is plated with silver panels depicting the gods; one in particular enables us to recognize Cernunnos.

The Celts in many cases replicated the gods into different *personae*, often into trinities. Four panels on the Cauldron depict divinities as busts with arms upraised in the *orans position*. Some or all of them were probably replications resident in the constellation of Hercules, inheriting from Menat (figure 2) the function of supporting the sky. Only one of those with upraised arms is selected for reproduction here, in figure 4 (upper), because he, accompanied as he is by the wheel, is easy to name. He was Tyrannus whose symbol, Mac Cana says, was the wheel. In my view this is Corona Borealis!

Let us now ask which of the images in figure 4 (lower) might be Lugh, and to



what constellation he might correspond. The central image, the Horned One, is quite arresting. The other images on the panel are the neighbouring constellations; subject to artistic license, they are in the right places. Ursa Major is turned around to face the Horned One to express his vassalship. Clockwise from the lower right, the following constellations can be recognized: Leo Major and Minor, Hydra, Boötes, Hercules/Ophiuchus (bearing horns as in figure 2), the Ass (an obsolete constellation), Ursa Minor, Delphinus, and Capricornus. On comparing the central Horned One with Boötes on the star chart, one sees a compelling likeness: the *Buddhic position* of the legs, and the torc on his right arm corresponding in position with Corona Borealis; this was also Lugh's sling or Mes Gegra's brain.

Very anciently, the Horned One was resident in the constellation of Menat (figure 2), which was Hercules plus Ophiuchus. As precession continued, the sky position of Menat ceased to signal the autumnal equinox, so the Horned One moved on into Boötes.

As mentioned earlier, snakes were used to mark important circles on the celestial sphere; for instance, Hydra marked the equator. Around 7500 BC the colure (meridian) of the autumnal equinox was marked by *Serpens Caput*, the snake in the hand of Menat. By 5000 BC the colure had moved to the staff in the left hand of Boötes (figure 1). The maker of the Cauldron depicted the staff as a mythical serpent [figure 4 (lower)]; it is to be explained as an attribute transferred from Menat. The staff could also be imagined as the upwardly extended left arm. This sky figure was none other than Lugh Lamhfhada, *of the Long Arm*, who was similar to the Indian god Savitar, *of the Wide Hand* (Mac Cana 1970). In the story of How Finn Got His Name, the Long Arm became the fish fork. Therefore, Lugh was a manifestation of the ancient Cernunnos, formerly dwelling in Menat, but later in Boötes. By this time he was called Lugh or Finn.

## 6. THE IDENTIFICATION OF BALOR/CONCUBAR AND THE DATING OF ORION

As may be seen in Table II and Endnote 1, Concubar has Sanskrit roots defining him as the original Cupid, a bow-hunter. We do not find Balor/Concubar on the Gundestrup Cauldron. For him we may look elsewhere for one or more of the motifs — a single eye, blindness, a weapon piercing the eye in the back of his head, the piercing of the head, or beheading. Orion is reputed to be blind (Allen 1963); no other constellation bears this attribute. The head of Orion is represented by only one star, Meissa (Allen 1963). It is a double in which the brighter star is pale white and of magnitude 3.5. To the naked eye this is a dim star, not visible through hazy cloud, so on occasion Orion is blind or lacks a head. Astrologically, then, Balor/Concubar can be identified with Orion.

As may be seen in figure 1, Orion is today a sloping figure. A vertical struck through him is tangent to the locus of the pole at about 3000 BC; he was vertical then. This date broadly sets the time of origin of the myth of David and Goliath, perhaps as early as 3500 BC.

Three star positions by which the ancients kept track of the calendar may be used to set a date for the formation of the myth, giving a result in agreement with dates suggested on other grounds. These positions were the following:

**Heliacal Rising:** when a star makes its first seasonal appearance on the eastern horizon just before dawn.

**Culmination:** when a star stands on the zenith meridian. After its heliacal rising, a star rises a little earlier each night until, halfway into its season of visibility, it is up all night. It then culminates at midnight. The nonsetting circumpolar stars can culminate, either low in the north (inferior) or overhead (superior).

**Heliacal Setting:** when a setting star makes its last seasonal appearance on the western horizon just after sunset.

Considering precession, around 3500 BC Boötes culminated in the inferior position on August 4th, Lughnasadh (Lugh's Day). Orion was then low in the southeast. He would remain in the sky until his heliacal setting about November 4th, Samhain (Summer's End). In the interval between those dates he was exposed to the weapon of Lugh, whose long arm was extended toward him. Succumbing at Samhain, Orion went to the Otherworld. The Finn version is explicit: Finn lured the wizard over the cliff, that is, to the Otherworld.

The weapons in the myth may have been inspired by a meteor shower. A meteor, or shooting star, is vividly mythologized as a thunderbolt, a thrown spear, a glinting sword, or a sword half-drawn from the scabbard and reinserted. Meteors originate from solid particles, usually only grain-sized, that fall from space into the atmosphere where they burn in a white-hot glow. Some, believed to be remnants of comets, occur in showers of a few days duration centred on the date when their orbit intersects the Earth's orbit. From year to year showers may vary in the maximum number visible per hour. A shower comes from a definite direction in space, and by perspective the meteors seem to radiate from a point on the celestial sphere called the radiant. A shower takes its name from the constellation in which the radiant lies.

Selected meteor showers are listed in Table III. Of all the constellations, only three bear the name of a mythical hero and at the same time contain a meteor radiant. Perseus is one, but he can be identified with Mithra and so is disregarded here. Hercules and Orion remain, the possessors of the thrown weapons. Never in

TABLE III  
SELECTED METEOR SHOWERS

Shower	Intensity	Present Date	Date, 3500 BC
Tau Herculids	Minor	May 19–June 14	March 2–28
Orionids	Major	October 21	August 4
Perseids	Major	August 10–14	*

\* Weapon of Mithra; see Endnote 2.

TABLE IV  
INTERNATIONAL EXAMPLES OF THE MYTH

Culture	Myth	Reference
Egyptian	Seth betrayed Horus to his death.	Mercatante (1988)
English	St. George slew the dragon.	Mercatante (1988)
German	Siggurd slew the dragon Fafnir.	Frazer (1911)
Greek	Ulysses blinded one-eyed Polyphemus with a firebrand.	Holme (1979)
Indian	Despite the dragon Vrtra fighting back, Indra slew him with a thunderbolt made by Tvastr (Indian Vulcan).	Basham (1968)
Roman	A challenger engaged in mortal combat with the king of the grove where the tree grew with the golden bough.	Frazer (1911)
Norse	Vali killed the blind Hodur.	Mercatante (1988)
Welsh	Pwyll split Havgan's shield in combat for the kingship. Gwydyon killed Pryderi while their armies stood back. Culhwch caught giant Ysbaddaden's spear and threw it back: aimed at his eyeball, it came out of his neck. Peredur threw his sword at a black horseman, who disappeared.	Gantz (1985)

any age has Orion been visible at the time of the Herculids, since at that time the Sun is invariably close to Orion, outblazing him. Boötes is not the radiant for a major meteor shower, and neither is Corona Borealis (Sherrod 1981). However, Hercules/Aed/Vulcan was the Smith who made the weapons. It was only possible for Hercules to give the bolts to Boötes. (As a parallel, Saul gave David his armour — I Samuel 17:38.) Boötes then flung the bolts with his sling, Corona Borealis.

Around 3000 BC, Orion was visible from August to October. Boötes, low in the north on August 4th, was in position to bombard him until his heliacal setting — but not without opposition from Orion, as implied by a Vedic hymn in praise of Indra for slaying the dragon Vrtra: Vrtra fought back. The same is implied in the story of Culhwch (both in Table IV). Vrtra's weapon was perhaps an Orionid meteor.

TABLE V  
THOMPSON CLASSIFICATIONS IN THE DAVID AND GOLIATH STORY  
AND SIMILAR MYTHS

Classification	Motif
A1336	Origin of Murder (Genesis 4:8).
F512.1	Person with one eye (includes Odin).
F512.1.1	Person with one eye in centre of forehead.
F513.1.1.1	Giant with one eye in middle of forehead
F531.1.1.1.3	Blind giant (Nordic).
F611.3.2.5	Small child beats giant challenger.
F839.3	Cain slaying Abel with a camel bone.
P556	Challenge to battle (Irish myth).
P556.2	Challenge to battle by hurling javelin skyward (Aeneid ix, 53).

## 7. THE INTERNATIONAL CHARACTER OF THE MYTH

Some examples of tales like David and Goliath in various cultures are listed in Table IV. Folk themes have been codified by Thompson (1975). For motifs resembling those in the David and Goliath story, the Thompson classification numbers are listed in Table V. Tables IV and V are not exhaustive, but the examples suffice to demonstrate that the tale was international.

## 8. CONCLUSION

I would conclude, then, that the story of the type, *David slaying Goliath*, or *Lugh killing Balor*, was a myth of the stars. The Celts, and most other nations of Europe and eastward to Persia and northern India, speak Indo-European languages derived from Sanskrit, a language spoken by a people who about 4000 BC burst westward from Central Asia in the Kurgan Invasion. The great antiquity of the Celtic gods has been shown by the presence of their names in Sanskrit. Certain gods of the Celts, as depicted on the Gundestrup Cauldron, bear a convincing resemblance to constellations of the northern sky. In particular, some figures — with their upraised forearms — look like the constellation Hercules, while Cernunnos or Lugh — with his folded legs — looks like Boötes. Lugh slew Balor by putting out his eye with a bolt from his sling, Corona Borealis. Balor is identified as Orion partly from his attribute of blindness, and partly from his name, Concubar, deciphered as Cupid, the bow-hunter. As a result of precession, Orion today is a slanted figure. Around 3500 BC he stood upright, so may then have been formulated as a constellation and named. At that time Boötes, low in the north on Lughnasadh, could bombard Orion with his bolt, a meteor forged by Hercules the Smith, and flung from the pouch which was Corona Borealis. In his heliacal setting Orion fell into the Otherworld. The myth of David and Goliath is

an international folktale, found in nations from Ireland to India, and its motifs are listed in Thompson's classification of folktales.

In sum, astronomy, archaeology, and mythology combine to underpin my main conclusion that stories of the type, *David slaying Goliath* or *Lugh killing Balor*, originated as a myth of the stars.

## ENDNOTES

1. **Concubar as Cupid.** These lines are intended to support the interpretation of Concubar as *desirous to grasp*, which is to say, *Cupid*. ÒhÒgáin (1991) comes close. He explains “con” as the genitive of the Irish cú, or *hound*, “fig” as *warrior* [unconvincing], and “cobhar” as *desirous*, so the name would mean *desirous of warriors*. Wyld (1936) is definite on the root of “con” as *seize* or *grasp*, and confirms that the root of cupid is *desirous*. So what was it that Concubar desired to seize? It was the hind of the red deer, the star Aldebaran,  $\alpha$  Tauri (Allen 1963). It may be seen in figure 1 that Orion could be interpreted as a hunter pressing forward, bow in hand, chasing Aldebaran westward as Cupid.

The associated myth was that of Dragos and the Ritual Hunt (Eliade 1972). Count Dragos, hunting with his companions, crossed the mountains on the trail of an aurochs [Taurus] or, in another version, a roe. Overtaking it on a beautiful plain [the Otherworld], they killed it on the edge of a stream [Eridanus] and feasted upon it. After going home, they returned with their wives and companions and settled upon the plain. Traditionally, St. George has been pictured as slaying a serpent-like dragon. The secondary meaning of dragon is *serpent* (Table II). Thus, the monster he slew was Orion.

Kubera was an Indian god that might have been Concubar. He was a god of wealth, commander of the host of gnomes, and one of the four Guardians of the Universe (Basham 1967). A clue connects him to Orion: the early Irish called him Caomai (Allen 1963), a word meaning *guardian* (ÓSiochfhradha 1958).

Therefore, Concubar or Orion can be associated with Cupid, whom the Greeks transformed from the eager hunter to the cherubic Eros.

2. **Perseus as Mithra.** The round panel in the bottom of the Gundestrup Cauldron (not illustrated here) depicts a swordsman killing a bull. Ulansey (1989) has interpreted the scene as Mithra (Perseus) slaying the bull (Taurus). It was the French astronomer Joseph Jérôme le Français de La Lande (1732–1807) who identified Perseus with Mithra (Allen 1963).

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